

ABSTRACT OF THE DISCLOSURE

An acceleration sensor, installed together with an angular velocity sensor in the same casing, detects the acceleration induced by the external vibration. Its detection signal V_s is supplied to first and second band-pass filters to extract a driving system resonance frequency f_d of the angular velocity sensor as well as a difference frequency Δf between the driving system frequency component and a sensing system resonance frequency. The extracted signals V_{s1} and V_{s2} of respective frequency components are supplied to first and second window comparators. When each frequency component deviates from a predetermined range, a diagnostic signal V_d notifying the abnormal condition of the angular velocity sensor is produced.